

### **REMARKS**

This responds to the Office Action mailed on September 8, 2004.

Claims 1 and 15 are amended. No claims are canceled or added. As a result, claims 1-28 are now pending in this application.

#### **Amendments to Claims 1 and 15**

Independent claims 1 and 15 have each been amended by adding the language “, each fin further having a tip, wherein a face has a periphery defined by the fin tips, wherein the face is to face a heat-generating electrical component, and wherein the face comprises inter-fin openings”.

Support is provided, for example, in independent claim 22. No new matter has been introduced.

#### **Rejection of Claims 1-3, 5, 6, and 15 under 35 U.S.C. §102(b) as Anticipated by Mira**

Claims 1-3, 5, 6, and 15 were rejected under 35 U.S.C. §102(b) as being anticipated by Mira (U.S. 5,661,638).

Mira discloses a heat sink having a bottom surface having a plurality of arc-shaped fins 22 (FIGS. 3-4) formed therein and extending outward from a central region 24. The bottom surface prevents air from venting downward through the fins. As described at col. 4, lines 2-4, “. . . when coolant is directed onto the present heat sink 20, the coolant will flow radially outward from central region 24 . . . “.

Regarding independent claims 1 and 15, Mira fails to disclose all of the structural elements recited in claims 1 and 15, as amended. For example, Mira does not disclose a face to face a heat-generating component and comprising inter-fin openings.

The rule under 35 U.S.C. §102 is well settled that “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). MPEP §2131.

For the above reasons, claims 1 and 15 should be found to be allowable over Mira, and Applicants respectfully request that the rejection of claims 1 and 15 under 35 U.S.C. §102(b) as anticipated by Mira be withdrawn.

Claims 2-3 and 5-6, which depend from claim 1, and incorporate all of the limitations therein, are also asserted to be allowable for the reasons presented above.

**Rejection of Claims 1-14, 18, and 22-28 under 35 U.S.C. §103(a)  
as Unpatentable over “Applicant’s Admitted Prior Art” in view of Mira**

Claims 1-14, 18, and 22-28 were rejected under 35 U.S.C. §103(a) as being unpatentable over “Applicant’s Admitted Prior Art” (AAPA) in view of Mira.

Mira was described above.

To establish a *prima facie* case of obviousness under 35 U.S.C. §103, the prior art reference (or references when combined) must teach or suggest every limitation of the claim. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA, 1974). MPEP §2143.

The asserted combination of AAPA in view of Mira fails to teach or suggest all of the claim limitations present in independent claims 1 and 15, as amended, or in independent claim 22, so a *prima facie* case of obviousness has not been established.

For example, neither AAPA nor Mira disclose the limitation “each fin further having a tip, wherein a face has a periphery defined by the fin tips, wherein the face is to face a heat-generating electrical component, and wherein the face comprises inter-fin openings”.

For the above reasons, independent claims 1, 15, and 22 should be found to be allowable over any combination of AAPA and Mira. All of the claims that depend from claims 1, 15, and 22, directly or indirectly, and incorporate all of the limitations therein, are also asserted to be allowable for the reasons presented above.

Applicants respectfully request that the rejection of claims 1-14, 18, and 22-28 under 35 U.S.C. §103(a) as being unpatentable over AAPA in view of Mira should be withdrawn.

### **Additional Elements and Limitations**

Applicants consider additional elements and limitations of claims 1-28 to further distinguish over the cited references, and Applicants reserve the right to present arguments to this effect at a later date.

### **Documents Cited But Not Relied Upon For This Office Action**

Applicants need not respond to the assertion of pertinence stated for the references cited but not relied upon by the Office Action, because these references are not made part of the rejections in this Office Action. Applicants are expressly not admitting to this assertion and reserve the right to address the assertion should it form part of future rejections.

### **Conclusion**

Applicants respectfully submit that claims 1-28 are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney, Walter W. Nielsen (located in Phoenix, Arizona) at (602) 298-8920, or the below-signed attorney (located in Minneapolis, Minnesota) to facilitate prosecution of this application.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

Serial Number: 10/656,968•

Filing Date: September 5, 2003

Title: Electronic Assemblies With High Capacity Heat Sinks and Methods of Manufacture

Assignee: Intel Corporation

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If necessary, please charge any additional fees or credit overpayment to Deposit Account  
No. 19-0743.

Respectfully submitted,

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Date Feb. 8, 2005

By Ann M. McCrackin  
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 8 day of February 2005.

Chris Hammond  
Name

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Signature